

the field of vision gone. Everything looks funny, and I feel as if a flash bulb had just gone off before my eyes. My hands tingle continuously. I get confused very easily. I am living with Marcia*, who is now married, on the edge of town, but still keep my apartment near the University. Ever since you introduced me to Omar, on the banks of the Charles, I have lived by his philosophy, and it has paid off. Now I eat well, sleep well, and enjoy my likker. Wonder how it will strike me at the end—will there be a general decay of faculties as the cancer progresses, or will I have a grand hemorrhage that really slaps me down?

“O. K. It’s been fun.”

My old friend spent a few very happy last weeks at Boothbay Harbor. Then he was taken to the hospital, unconscious, and lingered, without pain I believe and hope, until the fourteenth of September. He was much too young to go. Years of fruitful research and teaching, and many books, should still have come from his great gifts. His loss is a loss to science. As to his personal friends, they feel it too keenly to be able to speak of it.

CONTRIBUTIONS TO THE FLORA OF NOVA SCOTIA IV

E. C. SMITH AND J. S. ERSKINE

DURING the past few years rather extensive floristic surveys have been carried out in Nova Scotia sponsored mainly by the Nova Scotia Museum of Science and by the Nova Scotia Research Foundation. The former has been directed toward ecological studies of particular areas of the province and the building up of the herbarium of the sponsoring institution under the direction of J. S. Erskine. The latter survey has been conducted by E. C. Smith in connection with forest ecology studies. Some of the results of these surveys have already been published (Erskine, D. S. 1951; Erskine, J. S. 1953 and 1954; Smith and Schofield 1952; Schofield and Smith 1953). In the above and in the present paper, records of new plants for the province of particular interest have been the arctic-montane species reported mainly from northern Cape Breton Island which fill in range gaps from Newfoundland, New Brunswick, and New England.

* His daughter.

New plants of southern affinities have also been found and the coastal plain species of the province have been shown to be more widely dispersed than was previously supposed. The more intensive coverage of the province has also shown that some of our supposedly local and rare plants are more widely dispersed than was formerly thought. A considerable number of the records of species new to the province are naturalized introductions, and it is doubtful whether some of these will persist.

Many of the arctic-montane species have so far been found to be of very local distribution with each of the river valleys of northern Inverness and Victoria Counties having one or two species peculiar to one valley; i.e. *Oxyria digyna* (L.) Hill and *Saxifraga aizoides* L. from Big Southwest Brook, and *Phyllodoce caerulea* (L.) Babingt. and *Diapensia lapponica* L. from Lockhart Brook. The latter two species were confined to one series of north facing cliffs. Not all of these northern plants are restricted to northern Cape Breton. As the systematic exploration of the Cobequid Mountains of Cumberland and Colchester Counties, and the North Mountain, Kings County proceeds, more of these plants are being found, i. e. *Poa glaucantha* Gaudin and *Trisetum spicatum* (L.) Richter, var. *pilosiglume* Fern. at Amethyst Cove, Kings County, and *Solidago macrophylla* Pursh from this area and also from Cumberland and Colchester Counties.

The annotated list below of new and rare plants for the province is mainly the results of the 1952 summer exploration of the two groups mentioned above. During part of this time the two parties coöperated in the study of some areas in northern Cape Breton.

Grateful acknowledgement is made to the Nova Scotia Research Foundation and to the Nova Scotia Museum of Science for financial support and to the following persons who have aided the authors in various ways; D. S. Erskine for aid in identification and for bringing numerous interesting records to the attention of the authors; to W. G. Dore and staff of the Central Experimental Farm, Ottawa for determination of the *Gramineae* and other groups; to A. E. Porsild and H. J. Scoggan of the National Herbarium for checking the identity of some difficult species; and to A. E. Roland, Provincial Botanist, and others for permission to publish various records.

Various abbreviations are used throughout the paper. 1. JSE preceding a collection number refers to J. S. Erskine as collector. 2. The collections of the forest ecology parties are designated as follows: SECS: E. C. Smith, D. S. Erskine, E. H. Collins, W. B. Schofield in 1948; SCBS: E. C. Smith, E. H. Collins, J. M. Bruce, D. R. Sampson in 1949; SCBSB: E. C. Smith, E. H. Collins, J. M. Bruce, D. R. Sampson, F. C. Bent in 1950; SSSB: E. C. Smith, W. B. Schofield, D. R. Sampson, F. C. Bent in 1951; STWS: E. C. Smith, J. C. Taylor, D. H. Webster, L. B. Slipp in 1952 and 1953; SSTWS: E. C. Smith, W. B. Schofield, J. C. Taylor, D. H. Webster, L. B. Slipp in July 1953. 3. Can: National Herbarium, Ottawa; DAO: Department of Agriculture, Ottawa. 4. NSAC: Nova Scotia Agriculture College, Truro, N. S.

LYCOPodium SELAGO L. Reported first for the mainland of Nova Scotia by J. S. Erskine (1953), this plant is also known from Digby County: bank of run, Seal Cove, Brier Island, Roland, Smith *et al.*, June 15, 1949; occasional to rare on moss hummocks bordering small runnel through bog near Seal Cove, Brier Island, W. B. Schofield, September 4, 1951.

SELAGINELLA SELAGINOIDES (L.) Link. Known to be of scattered occurrence in the bogs of northern Cape Breton, the following two collections show the presence of this plant on the mainland and on southern Cape Breton. Richmond County: rare in bog, West L'Ardoise, SSSB 5137; Digby County: common in bog, center of Brier Island, Roland, Smith *et al.* 90.

WOODSIA GLABELLA R. Br. To the three known stations, all from Inverness County, for this rare fern (Robinson, 1904; Smith and Schofield, 1952) the following may be added: Victoria County: very rare on damp north-facing cliff wall, Indian Brook, STWS 6606; very rare in crevices of dry cliff, Lockhart Brook, Salmon River, SSTWS 7895.

CRYPTOGRAMMA STELLERI (Gmel.) Prantl. Inverness County: abundant on shaded limestone cliff, Hillsborough, STWS 6684; abundant in shaded crevices of conglomerate cliff face near Whycocomagh, SSTWS 8672. A northern or alpine species, known from Newfoundland, New Brunswick, and New England, these collections are the first for the province.

SPARGANIUM MULTIPEDUNCULATUM (Morong) Rydb. Reported by Roland (1947) as present at Sydney, North Sydney and Sable Island, the following two stations are of interest. Inverness County: in water of pond, Presquile, SCBSB 3380; Digby County: pond, Sandy Cove, JSE 52.1261.

SPARGANIUM FLUCTUANS (Morong) Rob. Rarely collected in the province, the following collections show a wider distribution than was formerly supposed. Cape Breton County: in water of pond back of beach, Main-a-Dieu, SCBS 2849, the first collection for Cape Breton Island; Guysborough County: leaves floating in water of Mannassette Lake, STWS 6793; in water of lake, three miles south of Goldenville, SECS 575; Halifax County: Chain Lakes, St. Margaret's Bay Road near Halifax, E. Gorham 45.1383; Cumberland County: in shallows of Big

Lake, JSE 52.978; Annapolis County: floating in two feet of water, McEwan's Lake, Albany, J. S. and D. S. Erskine: 262.

SPARGANIUM MINIMUM (Hartm.) Fries. Collected but once before on the mainland (Fernald, 1921), this plant was found growing in a lagoon of the Gaspereau River near Gaspereau, Kings County: D. H. Webster, September 3, 1952. To the known stations on Cape Breton Island may be added those from water of a lagoon of the Southeast Mabou River, Hillsborough, Inverness County, STWS 6704; and from a pond, Main-a-Dieu, Cape Breton County, JSE 51.1325.

POA ALSODES Gray. This rare grass was collected previously from four stations, two each from Colchester and Inverness Counties. Victoria County: in meadow at river edge, Cape North Village, STWS 6421.

POA GLAUCANTHA Gaudin. The report of *P. glauca* Vahl from the Province (Smith and Schofield, 1952), and at that time considered by Dore (*in litt.*) to be not quite typical, is now placed by him in *P. glaucantha* as are the following collections. Victoria County: cliff crevices, Gray Glen, JSE 52.358; occasional on dry cliff, one mile from mouth of Indian Brook, STWS 6629; Kings County: cliff crevices, Amethyst Cove, JSE 52.580. The latter collection is the first from the mainland of the province.

ERAGROSTIS CILIANENSIS (All.) Lutati (= *E. megastachya* (Koeler) Link). Kings County: edge of beach, Hall's Harbour, J. S. Erskine, August 12, 1949 (NSAC). Reported once previously as an adventive in the vicinity of Halifax in 1938 by Dore and Roland (1942), this station was also adventive.

LOLIUM MULTIFLORUM Lam. Kings County: old lawn, Wolfville, G. C. Warren, September 21, 1950; Hants County: in old field where it must have persisted for many years, Windsor, JSE 52.1143. Previously reported by D. S. Erskine (1951) from Halifax County, these records were confirmed by Dore who also knew of other stations not reported in his work (Dore and Roland, 1942).

ELYMUS CANADENSIS L. Pictou County: beside river at Alma, JSE 53.430. This collection confirms Macoun's report of this species from Pictou County. Cape Breton County: Sydney, G. C. Warren, July 5, 1938.

ARRHENATHERUM ELATIUS (L.) Mert. & Koch. Cape Breton County: Sydney, G. C. Warren, July 5, 1938 and July 15, 1948. These are the first collections for Cape Breton Island. Lunenburg County: gravelly roadside, East River, SECS 352; Kings County: Lake George, G. C. Warren, July 18, 1951; Digby County: roadside at North Light, Brier Island, Roland, Smith *et al.* 514. This grass was previously known from a well established station in Yarmouth County (Dore and Roland, 1942).

TRISETUM SPICATUM (L.) Richter, var. *PILOSIGLUME* Fern. Kings County: in cliff crevices and on ledges, Amethyst Cove, JSE 52.576; W. B. Schofield and D. H. Webster 4647. The Amethyst Cove station for this grass is the first for the mainland of Nova Scotia although it has been found to be present in many cliff habitats in northern Cape Breton.

MUHLENBERGIA MEXICANA (L.) Trin. Halifax County: Grand Lake,

M. O. Malte, September 5, 1924 (Can.). Known also from the Gaspereau, Halfway and St. Croix Rivers of the Minas Basin drainage in Kings and Hants Counties as reported by Dore and Roland (1942) and shown by the following collections, all from Kings County: crevices in rock cliff, Curry Brook, Wallbrook, D. S. Erskine, September 11, 1945; moist gravelly river bank, White Rock, J. S. and D. S. Erskine, September 7, 1945; dryish soil along the Gaspereau River, above Gaspereau, D. S. Erskine, August 12, 1946.

Panicum virgatum L., var. *spissum* Linder. This grass is native to the southwestern part of the province only, where it occurs at scattered stations. The following collections represent new county records and extensions of range into the central counties. Queens County: edge of north arm of Ponhook Lake, JSE 51.1501; Kings County: Lake George, G. C. Warren, July 18, 1951. The typical variety, apparently introduced, has been collected in Halifax County; railway yard under grain carrier, Halifax, L. S. Brown, September 27, 1949 (NSAC).

Panicum xanthophysum Gray. Lunenburg County: open thickets, Bridgewater, J. Macoun, July 18, 1910 (Can. 81489). Record omitted by Dore and Roland (1942). An extension of range from Maine.

Scirpus cespitosus L., var. *delicatulus* Fern. Inverness County: abundant in damp cliff crevices, McCoy's Pool, Northeast Margaree River, STWS 6312; a second collection for the province.

Carex bromoides Schkuhr. Previously collected from a marsh near Truro by Macoun, the following collection, identified by J. A. Calder, represents the second for the province and the first for Cape Breton Island. Inverness County: in large clumps, damp woods, Stratlorne, STWS 6175.

Carex scirpoidea Michx. Victoria County: locally abundant in damp cliff crevices and on ledges, Lockhart Brook, Salmon River, STWS 6385. A second collection for the province, it having been collected near Glace Bay by Macoun.

Carex abdita Bickn. Digby County: wet run in old field, south of North Point, Brier Island, Roland, Smith *et al.* 305. This Brier Island occurrence is in keeping with the more northerly range of this species relative to *C. umbellata*.

Carex tuckermanii Boott. Hants County: small swale by woods road northeast of Sweets Corner, J. S. and D. S. Erskine 50.384. New to the province, the collection represents a range extension from New Brunswick.

Juncus trifidus L. Inverness County: one clump on rock face overhanging river, upper Northeast Margaree River, JSE 52.359; Victoria County: occasional in dry crevices of north facing cliff, Lockhart Brook, Salmon River, STWS 6342; dry cliff crevices, Gray Glen near Cape North Village, JSE 52.359. These collections are the first for the province for this arctic-montane species and represent an extension of range from the mountains of Quebec, Newfoundland and New England.

Cyripedium reginae Walt. This species is one of the rarest of the

genus in Nova Scotia with few recorded stations. The following collections are therefore of interest. Victoria County: rare in swamp, Bay St. Lawrence, JSE 52.392; occasional in alkaline bog near Baddeck Forks, SSTWS 8194; Inverness County: occasional in alkaline bog, Black River, SSSB 4925; Cape Breton County: very abundant in large clumps, swamp, Ball's Creek, SCBSB 3295.

HABENARIA VIRIDIS (L.) R. Br., var. *BRACTEATA* (Muhl.) Gray. Few recent collections of this rare orchid have been made. Rarely abundant, it has been found at scattered stations in northern Cape Breton. Victoria County: abundant in deciduous forest, Lockhart Brook, Salmon River, STWS 6360; occasional in rich intervale forest, North Aspy River, SECS 1131; Inverness County: occasional in fir forest, Cape St. Lawrence, SCBSB 3542.

SALIX CANDIDA Flügge. Inverness County: black spruce bog in alkaline area, Black River, SCSB 4926 and STWS 7708. A first collection for Nova Scotia and a range extension from Newfoundland and New Brunswick where it is found in calcareous bogs and thickets.

BETULA MICHAUXII Spach. This species was reported from two stations in the province by Rousseau and Raymond (1950), one each from Digby and Guysborough Counties. The former record is based upon the following collections. Digby County: locally abundant in wet parts of peat bog, Big Meadow, Brier Island, Roland, Smith, *et al.* 312 and 539. A third station for this rare species has since been found. Guysborough County: a single colony in grassy sphagnous bog, near mouth of Gaspereau Brook, STWS 9470.

COMANDRA RICHARDSIANA Fern. Previously reported from two stations on the east coast of Cape Breton, the following collections show this plant to be more widespread in this area than was formerly thought. Victoria County: a few large clumps under spruce on sand dunes, South Pond, Aspy Bay, STWS 6461 and JSE 52.376; locally abundant at edge of pond behind beach, one mile south of Black Brook mouth, STWS 6560.

RUMEX MEXICANUS Meisn. Kings County: abundant on river bank below bridge, Kentville, JSE 52.1314. This species was collected once previously by J. S. Erskine at Sweets Corner, Hants County but the specimen was lost. These records are the first for the province and form an extension of range from Chatham, New Brunswick where the species was collected by Groh in 1926.

CHENOPODIUM CAPITATUM (L.) Aschers. Yarmouth County: in garden at Yarmouth, September 19, 1951, collector unknown, leg. I. V. Hall (DAO). New to the province and an extension of range from the Bay of Chaleur, New Brunswick.

MONTIA LAMPROSPERMA Cham. Digby County: rather rare in wet crevices of sea cliff between North Point and Seal Cove, Brier Island, Roland, Smith *et al.* 276; Inverness County: one plant floating in a hillside trickle, Port Hawkesbury, JSE 52.164. Previously collected at Northwest Arm, Halifax by Macoun and Burgess, these recent collections represent

a second and third station for the province and a first for Cape Breton.

THALICTRUM CONFINE Fern. Halifax County: a collection made by M. O. Malte at Grand Lake, September 5, 1924 (Can.) appears to be the first record of this species for the province.

CALTHA PALUSTRIS L. This plant apparently has a sharply restricted range in Nova Scotia being found in marshy places along the coastal plain of northern Inverness County. The collection of Macoun from Whycocomagh in 1883 and the record in Lindsay's list (1877) from Mahone Bay have not been substantiated by collections in recent years although several attempts have been made to relocate it. The following collections indicate the present known range of this species. Inverness County: wet meadow, Northeast Margaree, SSSB 4032; wet river edge, Margaree River near Margaree Harbour, SECS 979; wet places, Terre Noire, STWS 7370; wet places, St. Joseph du Moine SSSB 4028; swamp, Cheticamp, SCBSB 3639; occasional in marsh near mouth of Grand Anse Brook, Pleasant Bay, SSSB 4244.

DRABA PYCNOSPERMA Fern. and Knowlt. Victoria County: locally abundant and diseased, dry cliff ledges, Lockhart Brook, Salmon River, STWS 6376. This collection is a first record for the province.

DRABA ARABISANS Michx. Collected once previously in the province from Cape Blomidon, Kings County (Roland, 1947), the following collections show this species to be rather characteristic of cliff ledges and talus slopes in northern Cape Breton. Victoria County: locally abundant on dry ledges and talus, Lockhart Brook, Salmon River, STWS 6373; abundant, cliff ledges and talus, Indian Brook, SSTWS 8144; abundant in cliff crevices, Brunt Mountain, Gray Glen, STWS 6438.

ARABIS HIRSUTA (L.) Scop., var. *PYCNOCARPA* (M. Hopkins) Rollins. Victoria County: dry cliff crevices and talus slopes, Indian Brook, STWS 6618, SSTWS 8124, and JSE 52.483. These first collections extend the known range of this species from New Brunswick and New England.

ARABIS DRUMMONDI Gray. Reported by Roland (1947) as "scattered in northern Cape Breton from Big Intervale Margaree to Cape North," the following represent new stations in Victoria County: dry cliffs and talus, Lockhart Brook, Salmon River, SSTWS 7894; rare on dry cliff and talus, Indian Brook, SSTWS 8118; abundant at shaded cliff base, Burnt Mountain, Gray Glen, STWS 6446.

POTENTILLA HIPPIANA Lehm. Kings County: rare, in field, Marchants Farm, Brooklyn Corner, W. B. Schofield, July 6, 1948. A single crown root was seen representing a casual adventive from the prairies.

GEUM PECKII Pursh. Fernald's (1950) note of the occurrence of this plant in Nova Scotia is based upon the following collection. Digby County: abundant and scattered over an area of several acres, bog between Westport and Big Cove, Brier Island, Roland, Smith *et al.* 95 and 321. As noted by Fernald, this station represents an extension of range from the White Mountains of New Hampshire.

DESMODIUM GLUTINOSUM (Muhl.) Wood. Hants County: on gypsum bluff among *Rhus radicans*, Halfway River, JSE 53.294. This collection

is a second station for the province although only twelve miles from the first.

IMPATIENS PARVIFLORA DC. Kings County: one plant in barnyard, Wolfville JSE 53.208, probably introduced in plant collections from Prince Edward Island.

IMPATIENS GLANDULIFERA Royle. Omitted from Roland's Flora but listed by Fernald for Nova Scotia, the following collections were made from well established stations. Pictou County: common in vacant lots, New Glasgow, A. E. Roland 2612; Digby County: common as weed in dooryard, Westport, Brier Island, W. B. Schofield, 1664; Cape Breton County: growing with *I. capensis* in swamp, North Sydney, SSSB 5404.

EPILOBIUM STRICTUM Muhl. Cumberland County: pond edge, Amherst Point, JSE 52.911. Reported by Erskine (1951) from Antigonish County and Kings County, this collection indicates its presence in the north-central part of the province.

EPILOBIUM NESOPHILUM Fern. Inverness County: bog, head of South Blair River, SCBSB 3800; Victoria County: occasional in swamp, Bay St. Lawrence, SSSB 4505; Cape Breton County: rare in bog, Northwest Cove, Scatari Island, SSSB 5345. New to the flora of the province, consistent with its Gulf of St. Lawrence distribution (Newfoundland, Magdalens, and var. *sabulonense* on Sable Island).

EPILOBIUM HORNEMANNI Reichenb. Not listed in the provincial flora by Roland (1947) but mentioned by Fernald (1948 and 1950) as occurring in Cape Breton, this plant is now found to be characteristic of the banks of cold brooks in the northern part of that island. Inverness County: abundant, banks of cold brooks, Cheticamp River, SSTWS 7803; abundant, wet places along river bank, Three Brooks Pool, Northeast Margaree River, STWS 6318; abundant, shaded brook bank, east side of Big Intervale, Margaree, STWS 6285; occasional in damp places, birch-fir forest at an elevation of 1200 feet, Grand Anse Brook, SSSB 4222; Victoria County: abundant, edge of brook eight miles from mouth of Salmon River, STWS 6341; occasional, brook banks, Lockhart Brook, Salmon River, STWS 6363.

OENOTHERA GRANDIFLORA Ait. Digby County: an escape from cultivation established for one hundred yards along main road at Plympton, JSE 53.216.

OENOTHERA CRUCIATA Nutt. Previously known in the province from the slopes of sand dunes on Sable Island, this collection is the first for the mainland. Lunenburg County: Wentzell's Lake, JSE 52.1065.

PHYLLODOCE CAERULEA (L.) Bab. The discovery of this northern and montane plant in Cape Breton extends its range from Newfoundland, Quebec and Maine. Victoria County: locally abundant on steep north facing cliff slope, Lockhart Brook, Salmon River, JSE 52.513.

VACCINIUM ULIGINOSUM L., var. *ALPINUM* Bigel. The distribution and habitat of this arctic-alpine blueberry in the province is not well known. The following collections are of interest. Victoria County: bare gravelly slope of Burnt Mountain, Gray Glen, STWS 6439; a single

patch on sand dune, South Pond, Aspy Bay, STWS 6463; occasional on high exposure barren, Lockhart Brook, Salmon River, STWS 6350; forming mats on exposure barren, elevation of 1500 feet, Ingonish Barrens, SSSB 4622; on exposed rocks, exposure barren, seven miles west of Neil's Harbour, SCBSB 3809; local on sand beach of salt pond, Neil's Harbour, SCBSB 3496; on drier part of bog above Gray Glen Brook, SSSB 4415; Inverness County: in large clumps, old pasture, South Cape Mabou, STWS 7003; Cape Breton County: on rock outcrop near center of Scatari Island, SSTWS 8577; rare with *Empetrum nigrum* at coast, Scatari Island, SSSB 5276 and JSE 51.1136.

VACCINIUM OVALIFOLIUM Sm. Reported once previously for the province (Smith and Schofield, 1952) when it was found as a single colony, the following collection was made from a station covering several acres. Victoria County: shrub under open forest, Lockhart Brook, Salmon River, STWS 6386.

DIAPENSIA LAPPONICA L. Another range gap is closed by the discovery of this arctic-montane plant in Cape Breton. Victoria County: frequent in clumps on projecting shoulders and in crevices of steep north facing cliff slope, Lockhart Brook, Salmon River, JSE 52.319 and SSTWS 7919.

SCUTELLARIA CHURCHILLIANA Fern. Lunenburg County: scattered on lake shore, Wentzell's Lake, JSE 52.1059; abundant on lake shore, Lewis Lake, JSE 53.408.

STACHYS ARVENSIS L. An adventive not listed by Roland (1947). Halifax County: gardens and roadsides, Halifax, J. Fletcher, September 10, 1904 (DAO); Bedford Basin, Halifax, J. Fletcher, September 10, 1904 (DAO); weedy garden, Halifax, W. G. Dore and E. Gorham, 45.979; weed in garden of Dalhousie University Medical School, Halifax, J. S. Erskine, August 2, 1949; Lunenburg County: Nauss' Swamp, Chester, M. N. Zinck 480 (DAO); Hants County: abundant weed in cultivated field, Windsor, J. S. Erskine, October 5, 1945; Kings County: edge of lawn, Main Street, Kentville, J. S. Erskine, September 13, 1948.

LINDERNIA DUBIA (L.) Pennell. First collected by Fernald at Sheffield Mills, Kings County, the following collection is a second station for the province. Lunenburg County: abundant on bottom of drained mill pond, Maitland Pond, JSE 52.1109.

VERONICA TENELLA All. (= *V. serpyllifolia* L., var. *borealis* Laestad.). New to the province, this plant has been found to be present in its habitat on many of the cold northern brooks. The isolated populations in the different ravines seem to differ somewhat in flower color and in general appearance. Victoria County: abundant, wet mossy brook banks, eight miles from mouth of Salmon River, STWS 6338; common along Gray Glen Brook, SSSB 4461; Inverness County: occasional on gravelly river bank, South Blair River, SCBSB 3793; abundant on wet cliff face, Big Intervale, Margaree, STWS 6251.

VERONICA PEREGRINA L. Halifax County: edge of bare slate, Martello Tower, Halifax, J. S. Erskine, July 31, 1948. New to the flora, a weedy species native to North America and well known east to Quebec.

RHINANTHUS CRISTA-GALLI L. The typical variety of this plant is very rare in Nova Scotia (Roland, 1947). The following collections, all from the more exposed coastal areas, have been made in recent years. Digby County: old hay field near North Light, Brier Island, Roland, Smith *et al.* 500; Inverness County: common in pasture at shore, Cape St. Lawrence, SCBSB 3512; Cape Breton County: rare in field at Northwest Cove, Scatari Island, SSSB 5363; abundant on exposed areas behind beach, Eastern Harbour, Scatari Island, SSTWS 8525.

GALIUM LABRADORICUM Wieg. Known from the neighbouring provinces and from the New England States, a range gap is filled by the discovery of this plant in Victoria County: abundant in wet meadow, Bay St. Lawrence, SSSB 4508.

CAMPANULA APARINOIDES Pursh. Hants County: abundant along river beaches and in meadow, Kennetcook River near Mosherville, JSE 53.356; Pictou County: abundant in meadow, Marshy Hope, SSTWS 8824.

EUPATORIUM RUGOSUM Houtt. Cumberland County: frequent along brook near outlet to the sea, Mill Brook west of West Advocate, JSE 52.897. A new record for the province and an extension of range from New Brunswick.

ASTER PILOSUS Willd., var. *DEMOTUS* Blake. Hants County: well established and scattered over several acres, west of Wentworth. A new record for the province representing an extension of range from central Maine.

ANTENNARIA PARLINII Fern. Not of common occurrence in the province, the following records may be added to those already published. Hants County: on gypsum cliffs, Halfway River, JSE 53.296; on dry bluffs, Kennetcook River, JSE 53.364; Kings County: open wooded bluff above Gaspereau River at Melanson, D. S. Erskine 912. In the case of the first two collections, all plants were sterile.

GNAPHALIUM SYLVATICUM L. Rather common eastward in the province, this plant has not previously been reported from the western counties. Queens County: rare on roadside near Devonshire, SSTWS 10315.

ANTHEMIS TINCTORIA L. Colchester County: common escape along railway track, Truro, SSSB 4804; Hants County: roadside, "probably a garden escape," Fish Hatcheries, Lebreau's Creek, Martock, H. T. Bell, A. Gorham, J. Bailly and A. Marshall 50.138; Halifax County: edge of ballast heap, Steele's Pond, Point Pleasant Park, Halifax, J. S. Erskine, July 26, 1949. New to the province, this escape is becoming well established in the central part of the province.

SENECIO SQUALIDUS L. Halifax County: ballast heap, Steele's Pond, Point Pleasant Park, Halifax, J. S. Erskine, July 1949. Adventive from Europe, this appears to be a first record for Canada.

LAPSANA COMMUNIS L. Inverness County: common in old orchards and gardens, Hillsborough, SECS 1206; Victoria County: edge of brook beach, west of Warren Lake, SCBSB 3451. A persistent garden weed not previously reported from Cape Breton Island.

HYPOCHAERIS RADICATA L. Victoria County: meadows, Aspy Bay, M. S. Brown, July 15, 1946. This collection is the first for this weedy species in Cape Breton.

PRENANTHES × *MAINENSIS* Gray. Digby County: sea cliff, Sandy Cove, JSE 52.1149. R. Erskine had collected *P. racemosa* on these sea cliffs in 1949, but a return visit yielded only one plant of this species and one plant which appears to be a hybrid between this and *P. trifoliolata*.

Material substantiating the majority of these records has been deposited at the Acadia University Herbarium and the Herbarium of the Nova Scotia Museum of Science.—PERRY BIOLOGICAL LABORATORIES, ACADIA UNIVERSITY, WOLFVILLE, NOVA SCOTIA AND NOVA SCOTIA MUSEUM OF SCIENCE, HALIFAX, NOVA SCOTIA.

LITERATURE CITED

- DORE, W. G. AND A. E. ROLAND. 1942. Grasses of Nova Scotia. Trans. N. S. Inst. Sci. **20**: 177-288.
- ERSKINE, D. S. 1951. Species newly or rarely reported from Nova Scotia and Cape Breton Island. RHODORA **53**: 264-271.
- ERSKINE, J. S. 1953. Additions and extensions to the Flora of Nova Scotia. RHODORA **55**: 17-20.
- ERSKINE, J. S. 1954. The ecology of Sable Island. Trans. N. S. Inst. Sci. **23**: 120-145.
- FERNALD, M. L. 1921. The Gray Herbarium expedition to Nova Scotia 1920. RHODORA **23**: 89-111, 130-152, 153-171, 184-195, 223-246, 257-278, 284-300.
- FERNALD, M. L. 1948. A model flora of Nova Scotia. RHODORA **50**: 211-215.
- FERNALD, M. L. 1950. Gray's Manual of Botany, Eighth Edition, American Book Company, New York.
- LINDSAY, A. W. H. 1877. A catalogue of the flora of Nova Scotia. Proc. N. S. Inst. Nat. Sci. **4**: 184-222.
- MACOUN, J. 1888. Catalogue of Canadian Plants, Part IV—Endogenes. Dawson Bros., Montreal.
- ROBINSON, C. B. 1904. The ferns of Northern Cape Breton. Torreyia **4**: 136-138.
- ROLAND, A. E. 1947. Flora of Nova Scotia. Trans. N. S. Inst. Sci. **21**: 97-642.
- ROUSSEAU, J. AND M. RAYMOND. 1950. *Betula Michauxii* Spach in North-eastern America. RHODORA **52**: 27-32.
- SCHOFIELD, W. B. AND E. C. SMITH. 1953. Contributions to the Flora of Nova Scotia III. Some interesting white forms. Can. Field-Nat. **67**: 93-94.
- SMITH, E. C. AND W. B. SCHOFIELD. 1952. Contributions to the Flora of Nova Scotia. RHODORA **54**: 220-228.